Three-dimensional hepatic resection images on hepatic CT (a, b) and change of future remnant liver (b) in the clinical course of a patient with HCC and liver cirrhosis treated with PTPE prior to resection of the right hepatic lobe.

A fused image of hepatic SPECT and CT was created after adjusting the positions of hepatic SPECT and CT images. After a cutting line was placed systematically on hepatic CT images along the hepatic vein (d), the line was placed on all hepatic 99mTc-GSA-SPECT slices (c). In this way three-dimensional resection images on hepatic CT before (a) after PTPE (b) and 99mTc-GSA-SPECT image at day 230 after hepatic resection (e) were obtained. R0-remnant before PTPE (a), 18 days after PTPE (b), and post-hepatic resection (e) was 78.9, 84.2 and 353.3 nM/liver respectively.

241x180mm (300 x 300 DPI)
ROC analysis factors predicting liver failure using 99mTc-GSA- SPECT and CT before hepatic resection.

ROC curves were constructed based on data from 17 of 101 patients who developed liver dysfunction after hepatic resection, the receiver operating characteristic curves (ROC) showed that R0-remnant was superior to receptor concentration, KICG or LHL15. Area under ROC curve of R0-remnant was significantly larger than that of receptor concentration (p=0.024), KICG (p=0.007) and of LHL15 (p=0.002).
Total Receptor amount of remnant liver pre-hepatectomy, at 3 weeks post-hepatectomy, and values 2–3 months after hepatic resection in the future remnant liver between liver cirrhosis and chronic hepatitis.

Solid lines, chronic hepatitis patients; dashed lines, cirrhotic patients; dot line. Abbreviations: CH, chronic hepatitis; LC, liver cirrhosis; LCd 1, 2, 3: the patient with HCC and liver cirrhosis (LC) died of liver dysfunction after hepatic resection respectively.

Values of R0 remnant showed significant difference between CH and LC post OP 3weeks (p=0.0004) and post OP 2-3 months (p=0.000005).
Relationship between preoperative receptor values of remnant liver and receptor concentration in non-cirrhotic and cirrhotic patients.

Abbreviations: LC dead: tumor-bearing liver was cirrhotic and patient died of liver dysfunction after hepatic resection; LC dysf: cirrhotic liver and post resectional liver failure; Ch dysf: chronic hepatitis with dysfunction; N dysf: normal liver with dysfunction; CH, LC and N: chronic hepatitis, liver cirrhosis and normal.

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Changes of receptor amount of the remnant liver in patients undergoing PTPE before hepatectomy (n=17). In 5 patients with HCC with liver cirrhosis, 5 of HCC with chronic hepatitis and 7 of liver cancer with almost normal liver, PTPE was performed for the right portal vein before right hepatic rejection.

244x155mm (300 x 300 DPI)